

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 March 2005 (24.03.2005)

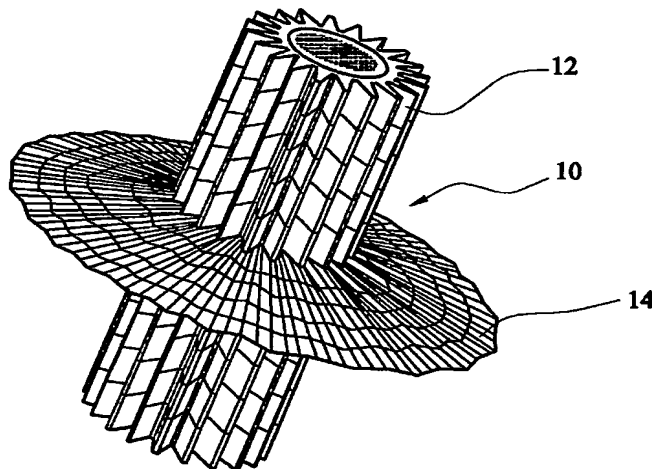
PCT

(10) International Publication Number
WO 2005/027149 A1

- (51) International Patent Classification⁷: **H01B 17/42**, 17/50
- (21) International Application Number:
PCT/GB2004/003988
- (22) International Filing Date:
20 September 2004 (20.09.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0321817.9 18 September 2003 (18.09.2003) GB
- (71) Applicant (for all designated States except US): **UNIVERSITY COLLEGE CARDIFF CONSULTANTS LIMITED** [GB/GB]; 55 Park Place, Cardiff CF10 3AT (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **WATERS, Ronald** [GB/GB]; 7 South Rise, Cardiff CF14 0RF (GB). **HADDAD, Abderrahmane** [GB/GB]; 30-36 Newport Road, Cardiff CF24 0DE (GB).
- (74) Agent: **EVANS, Huw, David, Duncan**; Urquhart-Dykes & Lord LLP, Three Trinity Court, 21-27 Newport Road, Cardiff CF24 0AA (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: INSULATING STRUCTURES



(57) Abstract: An electrical insulator (10) comprises an elongate shank (12) and one or more sheds (14) disposed along the length of the shank (12). The surface of the insulator comprises longitudinally extending flutes, the depth of which are varied along the length of the insulator such that the circumferential distance of all transverse sections along the length of the insulator is substantially constant or controlled. Instead of flutes, the surface may be formed with an array of protuberances and/or concavities. The insulator thus provides a defined perimeter and surface area along its length, such that areas of the surface are not preferentially heated by surface currents to form dry bands and thereby cause arcing. Such topography also renders the insulator less susceptible to the degrading effects of surface pollution.



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.